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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/560,560

06/23/2006

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EXAMINER

NGUYEN, PHUONGCHI T

ART UNIT

PAPER NUMBER

2839

MAIL DATE

DELIVERY MODE

03/31/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/560,560	Applicant(s) WEBER ET AL.	
	Examiner PHUONG NGUYEN	Art Unit 2839	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3,5-13 and 16 is/are pending in the application.
 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-3,5-13 and 16 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 June 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

1. Applicant's amendment of December 21, 2007 is acknowledged. It is noted that claims 1, 5 and 6 are amended. Claims 4 and 14-15 are canceled.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 2-3, 7-10 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bright et al (US6752663B2) in view of Capp et al (US5752854).

In regards to claim 1, Bright et al discloses (fig. 3) a shielding cage (122+231) extending along a longitudinal axis between a front side and a rear side (fig. 11) and comprising a diecast metal section (231) (col. 12, lines 3-5) extending from the front side over a first length (of 231) along the longitudinal axis characterized by a sheet metal section (122) (fig. 13) extending from the rear side towards the front side over a second length (of 122) along the longitudinal axis, the first length (of 231) being substantially shorter than the second length (of 122). Bright et al discloses the invention generally all as claimed, but does not show the diecast metal section having mounting tails on the circuit board. However, Capp et al The diecast metal section (1) (col. 2, lines 17-18) comprise mounting tails (12) for mounting the diecast metal section (1) to a circuit board (col. 2, lines 32-33)(fig. 9). It would have been obvious to one having ordinary skill at the time the invention was made to modify the diecast metal section of Bright et al by

having the mounting tails as taught by Capp et al for increasing the security of the diecast metal section on the circuit board.

In regards to claims 2-3, Bright et al disclose the invention generally all as claim, but does not show the ratio of the first length (of 231) to the second length (of 122) to be in the range 1:3 to 1:6 or 1:4 to 1:5. It would have been obvious to one having ordinary skill at the time the invention was made to change the ratio of the first length to the second length of Hwang et al to be in the range 1:3 to 1:6 or 1:4 to 1:5; since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. In *re Aller*, 105 USPQ 233.

In regards to claim 7, Bright et al discloses (fig. 3) the shielding cage (122+231) wherein the sheet metal section (122) comprises SMT tails (142) for mounting the sheet metal section (122) to a circuit board (106).

In regards to claim 8, Bright et al discloses (fig. 3) the shielding cage (122+231) wherein the sheet metal section (122) comprises SMC tails (142) for mounting the sheet metal section (122) to a circuit board (106) comprising means (holes 144) for engaging with the SMC tails (142)(fig. 1).

In regards to claim 9, Bright et al discloses (fig. 3) the shielding cage (122+231) wherein the diecast metal section (231) and the sheet metal section (122) comprise structures (446, 450) for engaging the diecast metal section (231) with the sheet metal section (122).

In regards to claim 10, Bright et al discloses (fig. 3) the shielding cage (122+231) wherein the diecast metal section (231) comprises positioning elements (450) for placing the sheet metal section (122) with respect to the diecast metal section (231).

In regards to claim 16, Bright et al discloses (fig. 3) the Electrical board connector (150) comprising a header assembly (104) and a shielding cage (122+231)(fig. 1).

4. Claims 11-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bright et al (US6752663B2) in view of Capp et al (US5752854) in view of claim 1, and further in view of Carey, II et al (US6858322B2).

In regards to claims 11 and 12, Bright et al discloses (fig. 3) the shielding cage (122+231) wherein the diecast metal section (231) is a diecast zinc section (col. 12, lines 3-5) and the sheet metal section (122) is a sheet conductive section (col. 4, lines 54-55). Bright et al discloses the invention generally all as claim, but does not show the copper, nickel and/or tin layer on the metal section. However, Carsey, II et al teaches the metal section to be or to be layered with layers of copper, nickel and/or tin (col. 45, lines 32-35) and/or to be capable of fusing on appliance of heat (col. 15, line 21-23). It would have been obvious to one having ordinary skill at the time the invention was made to provide the materials on the metal section of Bright et al by coating with the copper, nickel and/or tin layers as taught by Carey et al for increasing the durable life time for the metal section of the shielding cage.

5. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bright et al (US6752663B2) in view of Capp et al (US5752854) in view of claim 12, and further in view of Carey, II et al (US6858322B2).

In regards to claim 13, Bright et al discloses (fig. 3) the shielding cage (122+231) wherein the diecast metal section (231) is a diecast zinc section (col. 12, lines 3-5) and the sheet metal section (122) is a sheet conductive section (col. 4, lines 54-55). Bright et al discloses the invention generally all as claim, but does not show the copper, nickel and/or tin layer on the metal section. However, Carsey, II et al teaches the metal section to be or to be layered with layers of copper, nickel and/or tin (col. 45, lines 32-35) and/or to be capable of fusing on appliance of heat (col. 15, line 21-23). It would have been obvious to one having ordinary skill at the time the invention was made to provide the materials on the metal section of Bright et al by coating with the copper, nickel and/or tin layers as taught by Carey et al for increasing the durable life time for the metal section of the shielding cage.

6. Claims 1-3, 5-10 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hwang (US6478622B1) in view of Goodman et al (US5037331).

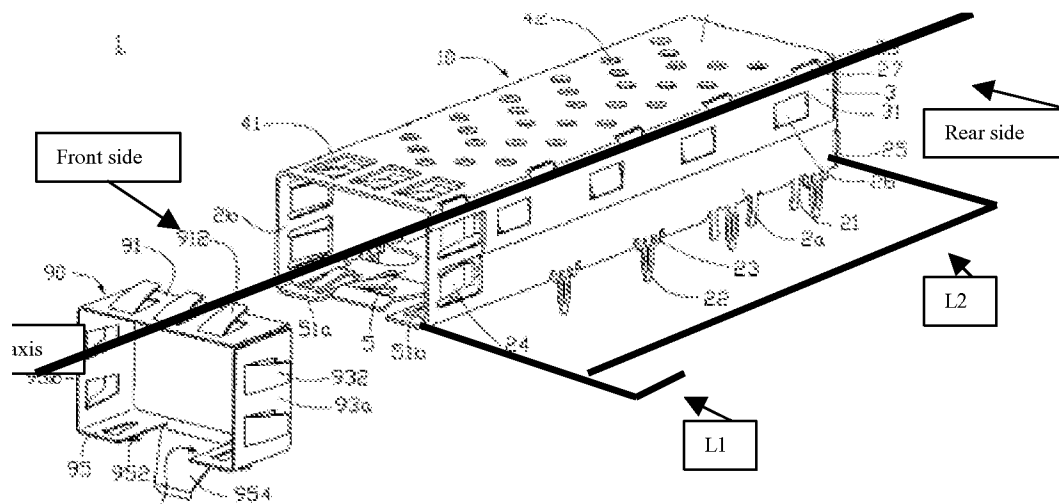
In regards to claim 1 and 5-6, Hwang discloses a shielding cage (10+90) extending along a longitudinal axis between a front side and a rear side (see marked-up below) and comprising a metal section (section of element 90) extending from the front side over a first length (L1) along the longitudinal axis characterized by a sheet metal section (section of element 10) extending from the rear side towards the front side over a second length (L2) along the longitudinal axis, the first length (L1) being substantially shorter than the second length (L2). Hwang discloses the invention generally all as claimed, but does not show the diecast metal section with mounting tails. However, Goodman et al teaches a diecast metal section (32) (col. 2, line 55) is over the sheet metal section (24) (col. 2, line 68) and (col. 3, lines 13-15) (fig. 1) and Hwang, himself, has the mounting tails (22, 23, 232, 222, 21, 212) for mounting the sheet metal section (section of element 10) to a circuit board (300); the mounting tails (22, 23, 232, 222, 21, 212) are solid integrated mounting tails of the metal section (section of element 10), and the mounting tails (22, 23, 232, 222, 21, 212) are pin tails (fig. 5). It would have been obvious to one having ordinary skill at the time the invention was made to modify the metal section of Hwang et al by having the diecast metal section as taught by Goodman et al for having a thicker metal section to increasing the holding force with the shell metal section at one end and the mating connector at another end and adding the additional mounting tails from the teaching of the mounting tails of the sheet metal section to the metal section of Hwang for increasing the good connecting between the metal section to the circuit board by itself.

In regards to claim 2, Hwang discloses the shielding cage (10+90) wherein the ratio of the first length (L1) to the second length (L2) is in the range 1:3 to 1:6.

In regards to claim 3, Hwang discloses the invention generally all as claim, but does not show the ratio of the first length (L1) to the second length (L2) to be in the range 1:4 to 1:5. It would have been

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obvious to one having ordinary skill at the time the invention was made to change the ratio of the first length (L1) to the second length (L2) of Hwang et al to be in the range 1:4 to 1:5; since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. In *re Aller*, 105 USPQ 233.



In regards to claim 7, Hwang discloses the shielding cage (10+9) wherein the sheet metal section (section of element 10) comprises SMT-tails (22) for mounting the sheet metal section (section of element 10) to a circuit board (300)(fig. 6).

In regards to claim 8, Hwang discloses the shielding cage (10+9) wherein the sheet metal section (section of element 10) comprises SMC tails (22, 23) for mounting the sheet metal section (section of element 10) to a circuit board (300) comprising means (soldering portion) for engaging with the SMC tails (22, 23) (col. 5, lines 11-12).

In regards to claim 9, Hwang discloses the shielding cage (10+9) wherein the metal section (section of element 90) and the sheet metal section (section of element 10) comprise structures (912) for engaging the metal section (section of element 90) with the sheet metal section (section of element 10) (fig. 1).

In regards to claim 10, Hwang discloses the shielding cage (10+9) wherein the metal section

(section of element 90) comprises positioning elements (954) for placing the sheet metal section (section of element 10) with respect to the metal section (section of element 90).

In regards to claim 16, Hwang discloses the shielding cage (10+9) wherein the electrical board connector (1) comprising a header assembly (electric components inside the body of 1) and a shielding cage (10+9)(fig. 11).

7. Claims 11-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hwang (US6478622B1) in view of Goodman et al (US5037331) applied as claim 1 above, and further in view of Carey, II et al (US6858322B2).

In regards to claims 11 and 12, Hwang discloses the invention generally all as claim, but does not show the copper, nickel and/or tin layer on the metal section. However, Carsey, II et al teaches the metal section to be or to be layered with layers of copper, nickel and/or tin (col. 45, lines 32-35) and/or to be capable of fusing on appliance of heat (col. 15, line 21-23). It would have been obvious to one having ordinary skill at the time the invention was made to provide the materials on the metal section of Hwang by coating with the copper, nickel and/or tin layers as taught by Carey et al for increasing the durable life time for the metal section of the shielding cage.

8. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hwang (US6478622B1) in view of Goodman et al (US5037331) applied as claim 12 above, and further in view of Carey, II et al (US6858322B2).

In regards to claim 13, Hwang discloses the invention generally all as claim, but does not show the copper, nickel and/or tin layer on the metal section. However, Carsey, II et al teaches the metal section to be or to be layered with layers of copper, nickel and/or tin (col. 45, lines 32-35) and/or to be capable of fusing on appliance of heat (col. 15, line 21-23). It would have been obvious to one having ordinary skill at the time the invention was made to provide the materials on the metal section of Hwang by coating

with the copper, nickel and/or tin layers as taught by Carey et al for increasing the durable life time for the metal section of the shielding cage.

9. Claims 1-3, 5-6, 9-10 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamaguchi et al (US6926557B1) in view of Goodman et al (US5037331).

In regards to claim 1, Yamaguchi et al discloses a shielding cage (20+30) extending along a longitudinal axis between a front side and a rear side and comprising a metal section (section of element 20) extending from the front side over a first length along the longitudinal axis characterized by a sheet metal section (section of element 30) extending from the rear side towards the front side over a second length along the longitudinal axis, **the first length being substantially shorter than the second length, the metal section (20) comprises mounting tails (24a) for mounting the metal section (of 20) to a circuit board (fig. 1& 4).** Yamaguchi et al discloses the invention generally all as claimed, but does not show the diecast metal section. However, Goodman et al teaches a diecast metal section (32) (col. 2, line 55) is over the sheet metal section (24) (col. 2, line 68) and (col. 3, lines 13-15) (fig. 1). It would have been obvious to one having ordinary skill at the time the invention was made to modify the metal section of Yamaguchi et al by having the diecast metal section as taught by Goodman et al for having a thicker metal section to increasing the holding force with the shell metal section at one end and the mating connector at another end.

In regards to claim 2, Yamaguchi et al discloses the shielding cage (20+30) wherein the ratio of the first length to the second length is in the range 1:3 to 1:6.

In regards to claim 3, Yamaguchi et al discloses the invention generally all as claim, but does not show the ratio of the first length to the second length to be in the range 1:4 to 1:5. It would have been obvious to one having ordinary skill at the time the invention was made to change the ratio of the first length to the second length of Yamaguchi et al to be in the range 1:4 to 1:5; since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or

workable ranges involves only routine skill in the art. In *re Aller*, 105 USPQ 233.

In regards to claim 5, Yamaguchi et al discloses the mounting tails (24a) are solid integrated mounting tails of the metal section (24).

In regards to claim 6, Yamaguchi et al discloses the mounting tails (24a) are PIP-tails.

In regards to claim 9, Yamaguchi et al discloses the metal section (20) and the sheet metal section (30) comprise structures (front end of 30, that engages to 20) for engaging the metal section (of 20) with the sheet metal section (of 30).

In regards to claim 10, Yamaguchi et al discloses the metal section (20) comprises positioning elements (sidewall 24) for placing the sheet metal section (30) with respect to the metal section (20) (fig. 8).

In regards to claim 16, Yamaguchi et al discloses the Electrical board connector comprising a header assembly (of body 10) and a shielding cage (20+30).

10. Claims 11-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamaguchi et al (US6926557B1) in view of Goodman et al (US5037331) applied as claim 1 above, and further in view of Carey, II et al (US6858322B2).

In regards to claims 11 and 12, Yamaguchi et al discloses the invention generally all as claim, but does not show the copper, nickel and/or tin layer on the metal section. However, Carsey, II et al teaches the metal section to be or to be layered with layers of copper, nickel and/or tin (col. 45, lines 32-35) and/or to be capable of fusing on appliance of heat (col. 15, line 21-23). It would have been obvious to one having ordinary skill at the time the invention was made to provide the materials on the metal section of Yamaguchi et al by coating with the copper, nickel and/or tin layers as taught by Carey et al for increasing the durable life time for the metal section of the shielding cage.

11. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yamaguchi et al (US6926557B1) in view of Goodman et al (US5037331) applied as claim 12 above, and further in view of Carey, II et al (US6858322B2).

In regards to claim 13, Yamaguchi et al discloses the invention generally all as claim, but does not show the copper, nickel and/or tin layer on the metal section. However, Carsey, II et al teaches the metal section to be or to be layered with layers of copper, nickel and/or tin (col. 45, lines 32-35) and/or to be capable of fusing on appliance of heat (col. 15, line 21-23). It would have been obvious to one having ordinary skill at the time the invention was made to provide the materials on the metal section of Yamaguchi et al by coating with the copper, nickel and/or tin layers as taught by Carey et al for increasing the durable life time for the metal section of the shielding cage.

Response to Arguments

12. Applicant's argue that "From the examiner's rejection involving Hwang it appears that the examiner believes that it would be obvious to make the grounding device 90 as a diecast member. This is incorrect. Grounding device 90 needs to have grounding" fingers 912, 932, 952 and spring tab 954 which can resiliently deflect as springs (see column 5, lines 17-26)" is not deemed persuasive, because 1) Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hwang (US6478622B1) in view of Goodman et al (US5037331); 2) the fingers 912, 932, 952, 954 of the metal section (ground device 90) is used to hold the main shell section in the rear and the mating section in the front. 3) the metal section including the fingers of Hwang et al is replacing by the diecast metal section as taught by Goodman et al for having a thicker metal section to increasing the holding force with the main shell metal section at one (rear) end and the mating connector at another (front) end.

13. Applicant's argues that "it was not obvious to make the metal shell 10 of Yamaguchi et al. as a diecast member" is not deemed persuasive; because the metal section of Yamaguchi et al is replaced by

the diecast metal section as taught by Goodman et al for having a thicker metal section to increasing the holding force with the shell main metal section at one end and the mating connector at another end.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phuongchi Nguyen whose telephone number is (571) 272-2012. The examiner can normally be reached on 8:00AM-4:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paula Bradley can be reached on (571) 272-2800 ext 33. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer

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Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/P. N./

/T C Patel/

Supervisory Patent Examiner, Art Unit 2839